BRUHAT BANGALORE MAHANAGARA PALIKE, YELAHANKA ZONE

Executive Engineeer
Byatarayanapura Division
B.B.M.P.

DRAFT TENDER SCHEDULE

Issued to : **Original / Duplicate**

NAME OF WORK: Package No. 04 (Package Consists of 4 Works Rs. 1000.00 Lakhs). 1. Improvements to Roads and Drains at Simhadri Layout, Muniswamappa Layout, Singapura, Singapura Layout, Express Layout, Lakkappa Layout, Singapura Garden, Singapura Paradise and Surrounding areas in New Ward No. 14 (kuvempunagara). 2. Improvements to Roads and Drains at Varadarajanagara 1st & 2nd Phase, Naidu Layout, HVV Valley, Kuvempunagara 1st and 2nd Stage, Hosabalunagara, Chandrappa Layout, Bharathnagara, Vinayakanagara and Surrounding areas in New Ward No. 14 (kuvempunagara). 3. Improvements to Roads and Drains at Ganesh Layout, MS Palya, Raghavendra Colony, Defence Layout, Balaji Layout, Srinidhi Layout, Teachers Layout, Ramachandrapura and Surrounding areas in New Ward No. 14 (kuvempunagara). 4. Providing Energy Efficient LED Street Lights and accessories in Byatarayanapura constituency.

Sl. No.	Quantity	Description	Unit	Rate In Figures	Amount	Rates In Words
1	2120.58	Removing and resetting of footpath slab	Sqm	235.00	498336.00	Rupees Two Hundred Thirty Five Only
2	7302.15	Earth work excavation by manual means for drains, canals, waste weir, draft, approach channels, key trenches, foundation of Buildings & bridges and such simillar works in all kinds of soils, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, excavated surface leveled and sides neatly dressed disposing off the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools & other appurtenaces required to complete the work.	Cum	266.20	1943832.00	Rupees Two Hundred Sixty Six and Twenty Paise Only
3	889.20	Removing and resetting stone slabs of drains and pointing in C.M (1:3)	Sqm	121.00	107593.00	Rupees One Hundred Twenty One Only
4	816.29	Providing and laying in position Cement Concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machinery, curing, and all the other appurtenances required to complete the work as per technical specifications.Mix 1:4:8 Using 40 mm nominal size graded crushed coarse aggregates	Cum	6230.40	5085813.00	Rupees Six Thousand Two Hundred Thirty and Forty Paise Only
5	138.70	Providing and laying in position Cement Concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machinery, curing, and all the other appurtenances required to complete the work as per technical specifications. Mix 1:2:4 Using 20 mm nominal size graded crushed coarse aggregate	Cum	6867.30	952495.00	Rupees Six Thousand Eight Hundred Sixty Seven and Thirty Paise Only

Sl. No.	Quantity	Description	Unit	Rate In Figures	Amount	Rates In Words
6	1752.23	Providing and laying in position Cement Concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necessary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications M20 Design Mix Using 20 mm nominal size graded crushed coarse aggregates	Cum	7650.83	13406014.00	Rupees Seven Thousand Six Hundred Fifty and Eighty Three Paise Only
7	108.80	Supplying, fitting and placing TMT FE 550 / 550D Steel Reinforcement including cost of all materials, machinery, labour, cleaning, straightening, cutting, bending, hooking, laping/welding joints, tying with binding wire / soft annealed steel wire and other ancilary operations complete as per drawing and technical specification. All other type of structures	Tonne	86912.10	9456036.00	Rupees Eighty Six Thousand Nine Hundred Twelve and Ten Paise Only
8	4954.80	Providing and laying 100mm thick pre-cast cover slabs over Road side drains/ utility ducts/ Rain water harvesting pit of width not exceeding 1000mm using M20 concrete reinforced with TMT bars Fe550 @ 6kg/m2 , Slabs jointed in CM 1:3 proportion and nicely finished Including providing holes in the Cover slabs whenever necessary for easy drainage of surface water including of labour, materials, scaffolding usage of machinery, curing, lead and lift charges etc, complete	Sqm	1287.00	6376828.00	Rupees One Thousand Two Hundred Eighty Seven Only
9	268.32	Providing and Fixing pre cast covering Slab 230mm thick made out of CC , Jelly 20mm Down Size with steel reinforcement including form work, curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc, complete as per Engineer incharge.	Sqm	5037.00	1351528.00	Rupees Five Thousand Thirty Seven Only
10	2344.20	Scarifying the existing bituminous road surface to a depth of 50 mm and disposal of scarified material by Mechanical Means using Hydraulic excavator with in all lifts and lead	Sqm	6.60	15472.00	Rupees Six and Sixty Paise Only
11	1675.87	Earth work in surface excavation by mechanical means for lowering & leveling the ground for all works other than foundation in all kinds of soils & upto depth not exceeding 300mm as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools,usage of machinery & other appurtenances required to complete the work.	Cum	104.50	175128.00	Rupees One Hundred Four and Fifty Paise Only
12	404.46	Construction of Granular sub-base Grading-V as sub-base and drainage layer by providing coarse graded crushed aggregates of granite/trap/basalt material, mixing in a mechanical mix plant at OMC, carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the 98% proctor density, complete as per specifications.	Cum	2735.70	1106481.00	Rupees Two Thousand Seven Hundred Thirty Five and Seventy Paise Only
13	1671.07	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver/grader in sub-base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density.	Cum	2814.90	4703895.00	Rupees Two Thousand Eight Hundred Fourteen and Ninety Paise Only
14	15059.74	Providing and applying Primer Coat with SS1 grade Bitumen Emulsion on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.90 kg per m2 using mechanical means MORTH Specification No. 502	Cum	58.30	877983.00	Rupees Fifty Eight and Thirty Paise Only

Sl. No.	Quantity	Description	Unit	Rate In Figures	Amount	Rates In Words
15	752.99	Providing and laying Dense Graded Bituminous Macadam with 40/60 TPH capacity HMP using crushed aggregates of specified grading, premixed with bituminous binder VG 30, @ 4.5 per cent by weight of total mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRTH specification clause No. 505 complete in all respects.	Cum	10393.90	7826503.00	Rupees Ten Thousand Three Hundred Ninety Three and Ninety Paise Only
16	22387.90	Providing and applying Tack Coat with RS1 Bituminous Emulsion using emulsion pressure distributor at the rate of 0.25 kg/m2 on the prepared bituminous surface cleaned with mechanical broom MORTH Specification No. 503	Sqm	15.40	344774.00	Rupees Fifteen and Forty Paise Only
17	895.51	Providing and laying Bituminous Concrete with 40/60 TPH capacity hot mix plant using crushed aggregates of specified grading, premixed with bituminous binder VG-30, @ 5.4 per cent of mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 507 complete in all respects	Cum	12049.40	10790358.00	Rupees Twelve Thousand Forty Nine and Forty Paise Only
18	807.40	Road Marking with Hot Applied Thermoplastic Compound with Reflectorising Glass Beads on Bituminous Surface Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250 g/m2 area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35:2015.The finished surface to be level, uniform and free from streaks and holes. MORTH Specification No. 803	Sqm	583.00	470714.00	Rupees Five Hundred Eighty Three Only
19	376.60	Supplying and Fixing Of Molded Shank Raised pavement Markers/ Cat's Eye made of polycarbonate and ABS moulded body and reflective panels with micro prismatic lens capable of providing total internal reflection of the light entering the lens face and shall support a load of 16000Kg tested in accordance to ASTM D 4280 type H and complying to specification of category a of MORTH circular No RW/NH/33023/10-97 Do III Dt 11.06.1997. The height, width and length shall not exceed 50mm, 100mm and 102+/- 2mm and with minimum reflective area of 13 cm2 on each side and the slope to the base shall be 35+/- 5 degree. the strength of detachment of the integarted cylindrical shanks, (of diameter not less than 19+/- 2mm and height not less than 30+/- 2mm) from the body is to be a minimum value of 500 Kg. Fixing will be By drilling holes on the road for the shanks to go inside, without nails and using epoxy resin based adhesive as per Manufacturer's recommendation and complete as directed by the engineer. the contractor shall submit a two year warranty for satisfactory field performance including stipulated retro-reflectance of the reflecting panel, to the engineer.	Nos	401.50	151205.00	Rupees Four Hundred One and Fifty Paise Only
20	232.09	Dismantling of cement concrete pavement by mechanical means using pneumatic tools, breaking to pieces not exceeding 0.02 m3 in volume and stock piling at designated locations and disposal of dismantled materials and stacking serviceable and unserviceable materials separately MORTH Specification No. 202	Cum	619.30	143733.00	Rupees Six Hundred Nineteen and Thirty Paise Only

Sl. No.	Quantity	Description	Unit	Rate In Figures	Amount	Rates In Words
21	245.16	Construction of Dry Lean Cement Concrete Sub- base over a prepared sub-grade with coarse and fine aggregate conforming to IS: 383, the size of coarse aggregate not exceeding 25 mm,aggregate cement ratio not to exceed 15:1, aggregate gradation after blending to be as per table 600-1, cement content not to be less than 150 kg/ m3 , optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid with a paver with electronic sensor, compacting with 8-10 t vibratory roller, finishing and curing. MORTH Specification No. 601	Cum	5412.00	1326806.00	Rupees Five Thousand Four Hundred Twelve Only
22	245.16	Construction of un-reinforced plain cement concrete pavement using RMC M-30 grade with OPC @ 270 kg/m3 and GGBS@ 90 kg/m3 (75:25 proportion) as per approved mix design procedure and thickness as per design, over a prepared sub base. The superplastisiser confirming to IS 9103-1999 Reaffirmed-2008 ,Coarse aggregates and Fine aggregate confirming to IS:383-2016, transported to site, laid in approved fixed side form work (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the form work). Spreading the concrete with shovels, rackers and compacted using needle, suitable plate vibrator and finished in a continuous operation including provision of separation membrane and Hessian cloth finishing to lines and grades complete including cost of all materials, labour, all lead & lift, loading charges as per specification & direction of Engineer - incharge of the work. (Groove cutting shall be paid seperately)	Cum	7451.40	1826785.00	Rupees Seven Thousand Four Hundred Fifty One and Forty Paise Only
23	256.90	Crack Groove Cutting: Groove shall be cut using hand held electrically operated concrete cutting machine of size of 50 mm wide and 75 mm deep on each side of the crack to form as "V" groove all along the crack to fill the polyester resin/ Epoxy putty (horizontal and vertical cracks). After the groove cutting, the concrete shall be removed from the groove using the pneumatic concrete chipping machine to form "V" groove. The item includes the cost of hire charges for all machineries, tools and barges and all labour charges etc., complete	Cum	825.00	211943.00	Rupees Eight Hundred Twenty Five Only
24	11491.86	Cost of Haulage Excluding Loading and Unloading Taking output 18 t load and lead 10 km = 180 t.km	t.km	198.00	2275388.00	Rupees One Hundred Ninety Eight Only
25	1025.00	Supply of LED Streetlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation. Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate material, delivering superior light output Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%, maximum light intensity should be between 60 degrees to 70 degrees. CCT > 5500K, IP66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains, Surge Protection- Min 5KV along with Over voltage/ Overload, short circuit/ miss-wiring protection. Compatible for pole mounting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. LED Light fixture with .....W System Power consumption. LED Efficiency>1301m/w, nominal CRI >75. Luminaire manufacturer should have in-house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008. Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body part. Warranty of 2 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED manufacturer & Cree/Nichia/ Lumileds/Osram make LED Source.LED Streetlight 90 W	Each	8860.00	9081500.00	Rupees Eight Thousand Eight Hundred Sixty Only
26	1025.00	Supplying and Fixing of.....mm dia class A GI pipe bracket upto 2 ms long bent at suitable angle and fixing to this bracket street light fitting of all capacities to GI or GI or rail or RCC pole / wall using suitable clamps, bolts, and nuts and wiring using suitable capacity wires.Using 32mm dia G.I.Pipe	Each	1045.00	1071125.00	Rupees One Thousand Forty Five Only

Sl. No.	Quantity	Description	Unit	Rate In Figures	Amount	Rates In Words
27	1025.00	Fixing charges of post top/ Gate/ Garden fitting /LED on the existing CI/ GI or any other pipe using required size of reducer, wiring using suitable wires.	Each	198.00	202950.00	Rupees One Hundred Ninety Eight Only
28	3075.00	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand copper wire with low conductor resistance single core in open or concealed system of wiring with specified IS 694:2010.10 mm^2	Each	167.00	513525.00	Rupees One Hundred Sixty Seven Only
29	167.00	Supplying and fixing Moulded Case Circuit Breaker (MCCB) over the existing wood/panel board using necessary screws,bolts, nuts, necessary phase separators, handle and wiring complete. Protection of Overload and Short circuit in Thermal Magnetic Release. Micro processor release shall have Earth Fault as per IS-13947. (Icu=100% Ics). In 4P MCCB , all Poles should have protection for Short-Cicrcuit/Over Load. For Microprocessor MCCBS Facility for segregating Priority and Non-Priority loads must be available in the MCCB. MCCB shall be provided with double insulation (insulation between front cover and internal power circuits to avoid any accidental contact with live current carrying path with the front cover open). Multi-pole breakers shall be designed to break all the poles simultaneously and they shall have a single mechanism.THREE Pole 100 A 25 kA	Each	6086.00	1016362.00	Rupees Six Thousand Eighty Six Only
30	167.00	Supply and Installation / Fixing / Provision of Outdoor type Thermoplastic Modular Panel enclosure with transparent Polycarbonate Lid, shock proof, IP65 (Weather Proof), rust proof,dust proof, water proof, corrosion proof having internally Embedded gasket on both lid and flap suitable to fix Single Phase / Three Phase Energy Meter in suitable base plate and having a provision for Fuse / MCB cut-out with suitable transparent hinged flap opening for operating MCB along with complete tamper proof SEALING facility.300 mm x 300 mm x 214 mm	Each	4512.00	753504.00	Rupees Four Thousand Five Hundred Twelve Only
31	20.00	1.1 KV Class HR (Heat Resistant) PVC Insulated & UnSheathed Aluminium Wires Multistrand Single Core Lead wires as per IS-694: 2010 PVC Wire - 16 Sqmm Al Wt: 4.2 Kg, Total Wt: 7.5 Kg/100 Mtr Coil	Coil	3542.00	70840.00	Rupees Three Thousand Five Hundred Forty Two Only
				Total	**84135449.00**	

Executive Engineer
Byatarayanapura Division
Bruhat Bengaluru Mahanagara Palike

Note:

1 Item for which no rate or price has been entered in will not be paid for by the Employer when executed and shall be deemed covered by the other rates and prices in the Bill of quantities (refer: ITB Clause 7.2 and CC Clause 33.2)

2 Unit rates and prices shall be quoted by the Tender in Indian rupees.

3 Where there is a discrepancy between the rate in figures and words the rates in words will govern (ITB Clause 19.1(a)

4 Where there is a discrepancy between the unit rate and the line item total resulting from multyplying the unit rate by quantity the unit rate quoted shall govern (ITB Clause 19.1(b))